

CRETACEOUS/TERTIARY FINDINGS, PARADIGMS AND PROBLEMS, C.B. Officer and C.L. Drake, Earth Sciences Department, Dartmouth College, Hanover, NH 03755

The asteroid hypothesis has stimulated numerous studies of the paleontological record at K/T time as well as of geological indicators of environmental crisis preserved in the rock record. Both extinctions and geological anomalies often occur at times that do not appear to be synchronous or instantaneous. The record includes paleontological indicators of dinosaurs, terrestrial flora, marine planktonic organisms, and shallow water marine macrofauna and geological phenomena include occurrences of iridium and other platinum metals, trace elements, clay mineralogy, shocked minerals, soot, microspherules, and isotopes of osmium, strontium and carbon.

These findings are reviewed in the context of the alternate hypotheses of an exogenic cause, involving either a single asteroid impact or multiple commentary impacts, and an endogenic cause, involving intense global volcanism and major sea level regression.